

REMARKS

Applicant has now had an opportunity to consider the Examiner's comments set forth in the Office Action of December 8, 2008. Claims 1-6, 8-9 and 19-23 are currently pending in the application. Claims 1, 19 and 20 have been amended.

Reconsideration of the Application is requested in view of the comments and amendments herein.

I. The Office Action

Claims 1-6, 8-9 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/07902 (WO '902).

Claims 1-6, 8-9 and 19-23 are rejected under 35 U.S.U. 103(a) as being unpatentable over Oshima et al. (U.S. 6,719,852) in view of WO'902.

II. Rejection of Claims 1-6, 8-9 and 19-23 Under 35 U.S.C. 103(a)

Claims 1-6, 8-9 and 19-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/07902 (WO '902). Applicant respectfully traverses the rejection for at least the following reason. WO '902 does not teach or make obvious the subject claims.

As amended, claim 1 (and similarly independent claims 19 and 20) recite an aqueous acidic solution that provides a black chromate conversion coating on zinc and zinc alloys comprising trivalent chromium ions, phosphorous anions, anions selected from the group of sulfate ions, nitrate ions, and combinations thereof, at least one transition metal or metalloid, and an organic chelate selected from the group consisting of carboxylic acids, polyarboxylic acids and combinations thereof. When present, the concentration of sulfate ions comprise about 0.02 to about 0.5M and the concentration of nitrate ions when present comprise about 0.06 to about 0.6M. When organic chelate is present, it comprises from about 0.02M to about 0.3. WO '902 does not teach or suggest such features. Applicant has amended claims 1, 19 and 20 to specify that the aqueous acidic solution provides a black chromate conversion coating in a single layer. WO '902 fails to teach or suggest the present invention as recited in the subject claims.

Particularly, WO '902 fails to teach or suggest an aqueous acidic solution that provides a black chromate conversion coating on zinc or zinc alloys comprising trivalent chromium ions, phosphorous anions, anions selected from the group consisting of sulfate ions, nitrate ions, and combinations thereof, at least one transition metal or metalloid, and an organic chelate selected

from the group consisting of carboxylic acids, polycarboxylic acids and combinations thereof, wherein the conversion coating provides corrosion resistance in a single layer. WO '902 describes treating zinc alloy in two steps, in two independent layers. The first step includes an aqueous Cr^{3+} aqueous solution, containing one or more complexing agent. The second step includes an aqueous solution containing an organic polymer, an anticorrosive metal oxide, and optionally a black pigment. (See bottom of page 4-top of page 5). After the first step is complete, the zinc alloy is rinsed and drained before treatment with the aqueous suspension containing organic polymers, anticorrosive metal oxides, and optionally black pigments. Therefore, it is clear that WO '902 does not teach a chromate conversion coating as claimed in the present invention. Rather, WO '902 provides a black anticorrosive coating formed of two strada on a zinc alloy. (Page 3, first paragraph).

More particularly, the Examiner argues that although WO'902 does not teach the claimed concentration of nitric and sulfuric acid, one skilled in the art would vary the amount of nitric and sulfuric acid in the coating solution to that of Applicant's in order to achieve the desired pH. Applicant asserts that this reasoning is illogical since Applicant does not teach that the amount of sulfuric and/or nitric acid present is determined based on desired pH. Applicant does not refer to pH with regard to sulfuric or nitric acid, nor do the particular sections of the specification even correspond to each other. In fact, both transition metals and organic chelates are discussed in between sulfate and/or nitrite ions and pH. Therefore, the Examiner's argument that one skilled in the art would use the teachings of WO '902 to achieve the Applicant's concentration of sulfate and/or nitrite ions is unsupported, particularly because there is no evidence that such concentration is in direct relation to pH.

For at least the aforementioned reasons, WO '902 does not teach or suggest the present invention as set forth in independent claims 1, 19 and 20 (along with claims 2-6, 8-9 and 21-23 that respectively depend therefrom). As such, Applicant respectfully requests the withdrawal of the rejection.

III. Rejection of Caims 1-6, 8-9 and 19-23 Under 35 U.S.C. 103(a)

The Examiner rejected claims 1-6, 8-9 and 19-23 under 35 U.S.C. 103(a) as being unpatentable over Oshima et al. (U.S. 6,719,852) in view of WO '902. Applicant respectfully

traverses the rejection for at least the following reason. Oshima in view of WO '902 does not, individually or in combination, teach or suggest each element of independent claims 1, 19 and 20 (along with claims 2-6, 8-9 and 21-23 that depend therefrom).

According to the Examiner, although Oshima fails to teach or suggest a coating solution that can produce a black chromate coating, it would have been obvious to one skilled in the art to have incorporated cobalt, nickel, and/or iron in a concentration of 0.001-0.1 mol/l each and black pigments such as carbon black in an amount of 5-20 g/l as taught by WO '902 into the solution of Oshima in order to produce a black chromate coating. Applicant respectfully disagrees.

As stated above, WO '902 teaches a two solution and two layer black anticorrosive coating wherein the first layer comprises an aqueous Cr^{3+} solution, containing one or more complexing agent, and the second layer includes an aqueous solution containing an organic polymer, an anticorrosive metal oxide, and optionally a black pigment. Therefore, not only is the black pigment only optional, it is also included in the second, non-chromium solution, which is separate and independent from the first, Cr^{3+} solution. Therefore, the Examiner's argument that it would have been obvious to incorporate carbon black into the solution of Oshima is baseless, and appears to employ the impermissible use of hindsight. Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning as to why one skilled in the art would look to a particular combination of references to solve a specific problem. In this instance, the Examiner's statement that it would have been obvious to look to the WO '902 reference to achieve the desired coating color is purely conclusory.

Additionally, the Examiner asserts that since Oshima has essentially the same composition as WO '902 and that different coating compositions result in different coating colors, it would be obvious to have varied the concentrations of the coating components in the coating solution of Oshima in order to achieve a desired coating color such as the black color coating as claimed. However, Applicant asserts that WO '902 teaches the use of a black pigment in the aqueous (second) solution. Since the first and second solutions in WO '902 together comprise the overall black anticorrosive coating, there would be no motivation to vary the concentrations of the coating components in WO '902 to achieve the desired black color coating, as the Examiner claims, since the black pigment is present for this particular purpose.

Therefore, for at least the aforementioned reasons, Oshima in view of WO '902 does not teach or make obvious the present invention as set forth in independent claims 1, 19 and 20

(along with claims 2-6, 8-9 and 21-23 that respectively depend therefrom). As such, Applicant respectfully requests the withdrawal of the rejection.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-6, 8-9 and 19-23) are now in condition for allowance.

Respectfully submitted,

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Date

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